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P A P E R S

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C H E M I S T R Y,

C H E M I S T R Y.

The Thanks of the Society were this Session given to JOHN SNEYD, Esq. of Belmont, in Staffordshire, for the following Communication on the Subject of PRESERVING SEEDS OF PLANTS in a state fit for Vegetation.

S I R,

MANY years ago having observed some Seeds which had got accidentally amongst raisins, and that they were such as are generally attended with difficulty to raise in England, after coming in the *usual way* from abroad, I sowed them in pots, within a framing; and as all of them grew, I commissioned my sons, who were then abroad, to pack up all sorts of Seeds they could procure in absorbent paper, and send some of them surrounded by raisins, and others by brown moist sugar; concluding

ding that the former Seeds had been preserved by a *peculiarly favourable state of moisture* thus afforded them. It occurred, likewise, that as many of our common Seeds, such as clover, charlock, &c. would lie dormant for ages within the earth, well preserved for vegetation whenever they might happen to be thrown to the surface, and exposed to the atmosphere, so these Foreign Seeds might be equally preserved, *for many months at least*, by the kindly covering and genial moisture that either raisins or sugar afforded them: and this conjecture was really fulfilled, as not one in twenty of them failed to vegetate, when those of *the same kinds*, that I ordered to be sent lapped in common parcels, and forwarded with them, would not grow at all. I observed, upon examining them all before they were committed to the earth, that there was a prevailing dryness in the latter, and that the former looked fresh and healthy, and were not in the least infested by insects, as was the case with the others. It has
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been tried repeatedly to convey feeds (of many plants difficult to raise) closed up in bottles, but without success; some greater proportion of air, as well as a proper state of moisture, perhaps, being necessary. I should also observe, for the satisfaction of the Society, that no difference was made in the package of the Seeds, respecting their being kept in husks, pods, &c. so as to give those in *raisins* or *sugar* any advantage over the others, all being sent equally guarded by their natural teguments. Whether any experiments of this nature have been made by others, I am totally ignorant; but I think that, should this mode of conveyance be pursued still more satisfactorily than I have done, very considerable advantages might result from it.

I am, &c.

JOHN SNEYD.

Belmont, Oct. 26, 1797.

Mr. MORE.

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The Thanks of the Society were, this Session given to Mr. BROWNE, Chemist, at Derby, for the following Letter, describing a quick and easy Method of converting Weeds and other Vegetable Matter into MANURE.

S I R,

ACCORDING to my promise to you some years since, I beg leave to communicate to the Society for the Encouragement of Arts, &c. and (if thought worth notice) by them to the world, a composition for Manure. Fearful it would not answer the purpose so fully as I could wish, I deferred from year to year troubling you; but I now find, both by numerous trials made by my friends, as well as myself, the very great utility of the composition, as well as its cheapness, with the capability of its being made in any situation and in any quantity.

quantity. The mode of making it is as simple as, I trust, it will be found productive. It is nothing more than green vegetable matter, decomposed by quick or fresh-burnt lime. A layer of the vegetable matter about a foot thick, then a very thin layer of lime, beat small, and so on; first vegetable, then lime, alternately. After it has been put together a few hours, the decomposition will begin to take place; and unless prevented, either by a few sods, or a forkfull of the vegetables at hand, it will break out into a blaze, which must at all events be prevented. In about twenty-four hours the process will be complete, when you will have a quantity of ashes ready to lay on your land at any time you wish. Any and all sorts of vegetables, if used green, will answer the purpose; say weeds of every description. They will doubly serve the farmer, as they will not only be got at a small expence, but will in time render his farm more valuable, by being deprived of all noisome weeds.

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But if this composition answers the purpose, as I flatter myself it will, a very short time will see almost every weed destroyed, which supposing to be the case, I have made my calculations with clover, grown for the purpose; for instance, I will take one acre of clover, which at one cutting will produce from fourteen to eighteen tons of green vegetable matter, and about three tons of lime; this, when decomposed by the above process, will yield ashes sufficient to manure four acres, the value of which I estimate at something under four pounds; the clover, according to the value of land here, I will say two pounds, which, take the average of the kingdom, is too much. The lime I will also say two pounds; but that will vary, according to the distance it is to be fetched. Take them together, I think will be about the average value. Now if this is the case, and as far as I have been able to try it I find so, how valuable must it be to the community in general! If it answers the purpose, I shall
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feel myself much obliged by the Society making it as public as they possibly can.

The vegetables should be used as soon after they are cut as possible, and lime as fresh from the kiln as the distance will allow of; as on those two circumstances depends the goodness of the composition.

I am, &c.

H. BROWNE.

Derby, April 27, 1798.

Mr. MORE.

The

The Thanks of the Society were this Session given to ARTHUR WILLIAM DEVIS, Esq. for the following Communication respecting the Culture of POPPIES, and the procuring OPIUM in the East-Indies.

S I R,

I SEND for the acceptance of the Society a small iron instrument, called by the natives of Hindoostan Nehrea,* and used by them for making incisions in the capsules of the plants for the extraction of opium. As

* This instrument, whose exact dimensions are shewn by the wood cut, is formed of two thin pieces of plate-iron, sharpened at the broad semicircular edge; and each being wound round with thread, the two are fastened together by other thread twisted round them, and thus held at a small distance from each other; one of the instruments is reserved in the Society's Repository.

NEHREA, *an Instrument used by the Natives of Hindoostan, for making incisions in the Poppy Head.*



As the cultivation of the Poppy in this country for the preparation of Opium has lately engaged the attention of this Society, I have taken the liberty to subjoin a few extracts from a memorandum on the subject, part of a work on the Arts, Manufactures, and Agriculture, of Hindoostan, collected at various times during my residence in India. I do not pretend to any practical knowledge, but if it may afford the least hint to those engaged in the pursuit, I shall feel great pleasure in the communication.

I am

Your humble servant,

A. W. DEVIS.

Mr. MORE.

“ The greatest quantity of Opium imported from India, is prepared in the province of Behar, the soil of which mostly consists of clay, with a considerable portion of sand. The richest soils of this description are preferred by the natives for the

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cultivation of the Poppy, which is the *PAPAVER SOMNIFERUM* of Linnæus. The ground is ploughed sixteen or eighteen times, and manured with the dung of cattle folded on it at night, or rotten cow-dung: the manure is ploughed in, and the ground thoroughly broken and carefully levelled with the harrow. The seed is sown in the broad-cast way; and the field is then divided into squares of four or five feet, leaving an interval, which is raised six inches; and on these ridges a channel is excavated to convey water to every square, from a well near the field. The plants are five or six inches from each other, and are watered once a week, or oftener, until they are sufficiently ripe for the extraction of the Opium. About seven days after, the flowers fall. When the capsules discover to the pressure a degree of hardness, they begin to collect the Opium. At sun-set, a double incision is made on each capsule, from the stalk upwards, at one stroke of the *Nehrea*: the operation is repeated every
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second.

second day, for a fortnight or three weeks. The juice which has exuded during the night, from the wounds made the preceding evening, is scraped off the capsule with a small iron scoop; this is done early in the morning, before the dew is dispersed. The seeds are valuable for the oil they contain, and, as an article of food, are in great request with the natives."